



# A Holistic Approach to Long Duration Energy Storage

Office of Electricity

Presented by Michael Pesin, Deputy Assistant Secretary, Advanced Grid R&D



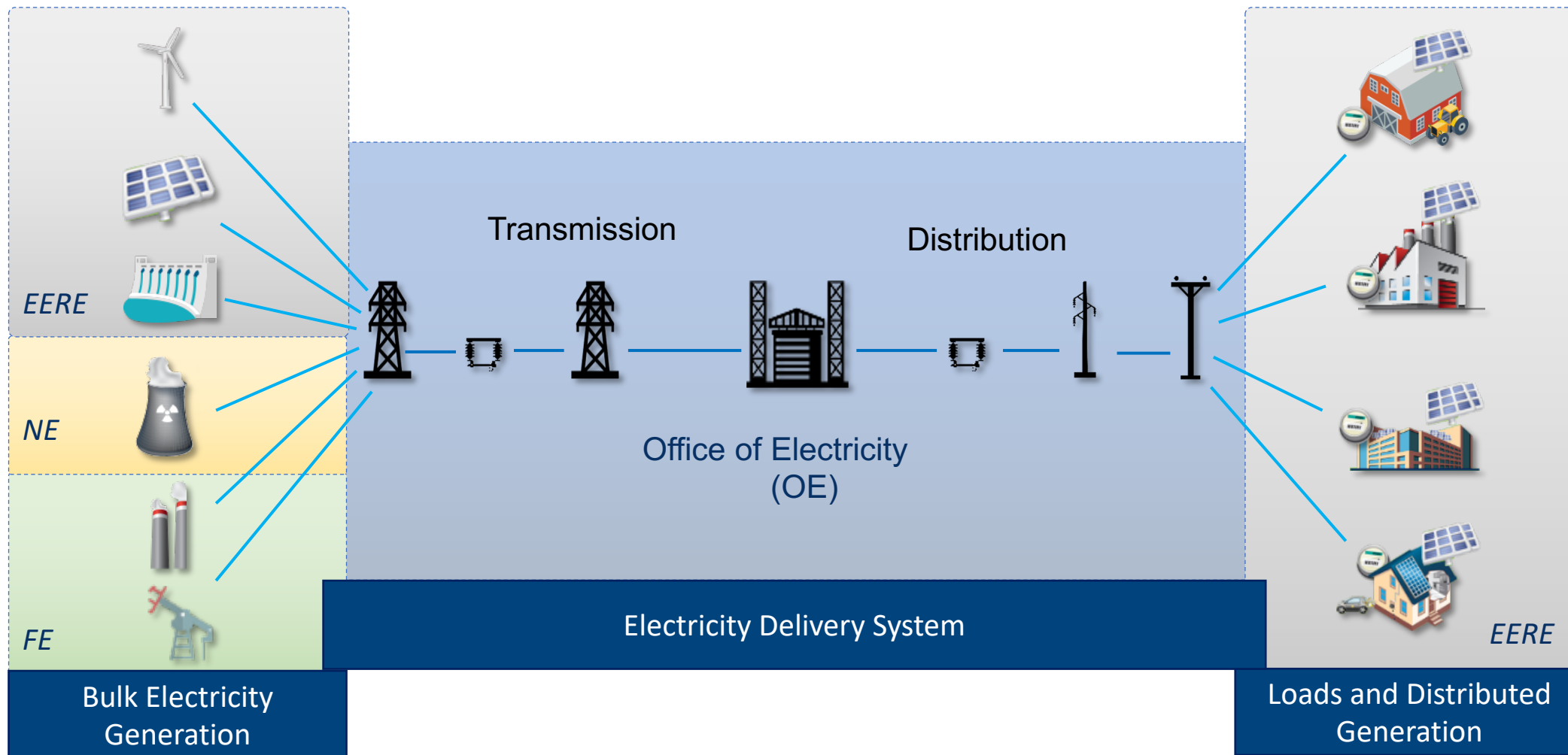
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# OE's Role in the Electric Grid





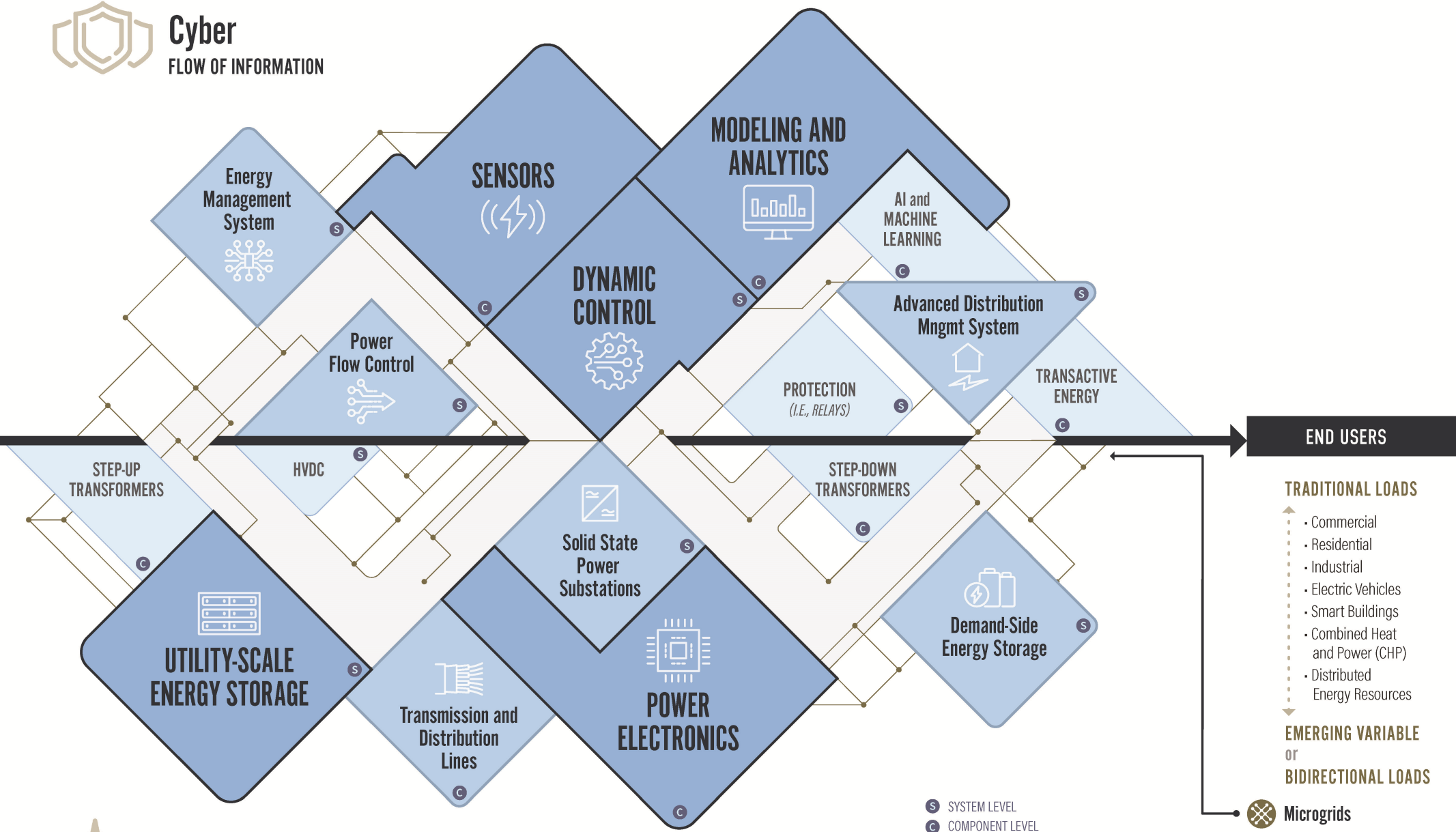
**Cyber**  
FLOW OF INFORMATION

**SYNCHRONOUS**

- Coal
- Nuclear
- Natural Gas
- Hydropower
- Biomass
- Geothermal
- Solar
- Wind

**ASYNCHRONOUS**

**BULK GENERATION**



**Physical**  
FLOW OF POWER



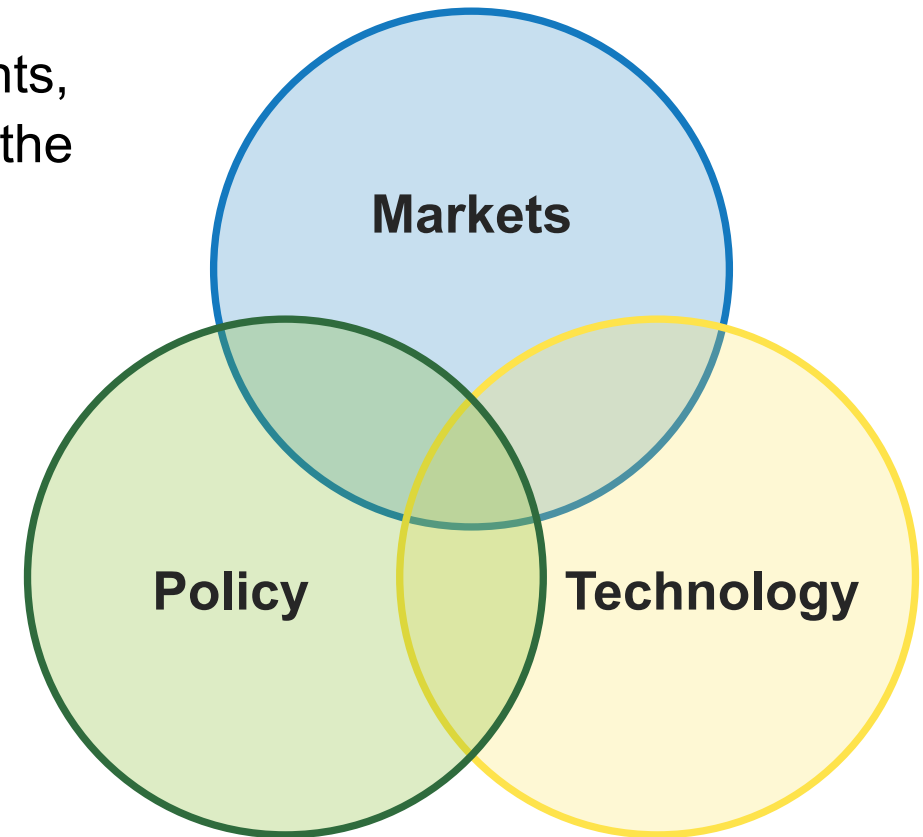
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# Grid Innovations

How We Drive Grid Resilience With Targeted R&D

If we meet these requirements, a new technology can push the sector forward. There's no margin for error.



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# ENERGY STORAGE GRAND CHALLENGE

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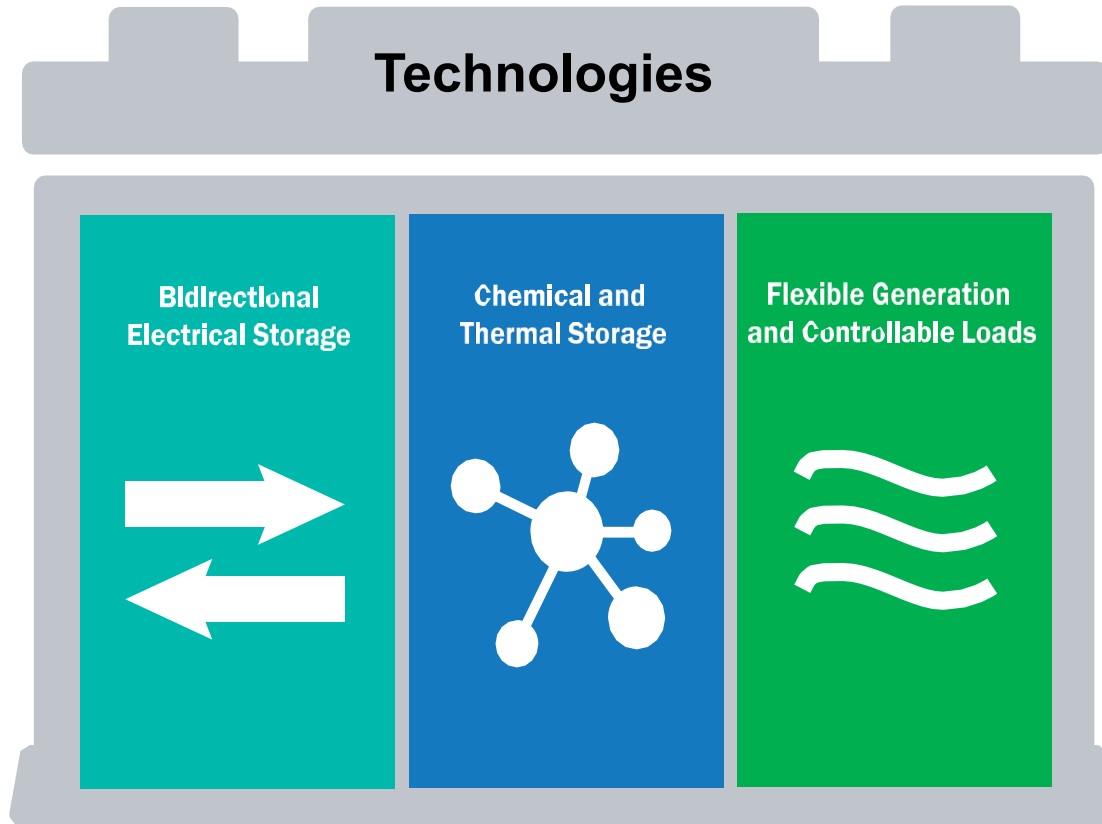
## ESGC Mission

The ESGC will focus resources from across the DOE to create a comprehensive program to accelerate the development and commercialization of next-generation energy storage technologies and sustain U.S. global leadership in energy storage



# DOE-wide strategy to accelerate U.S. leadership in energy storage

How We Drive Grid Resilience With Targeted R&D



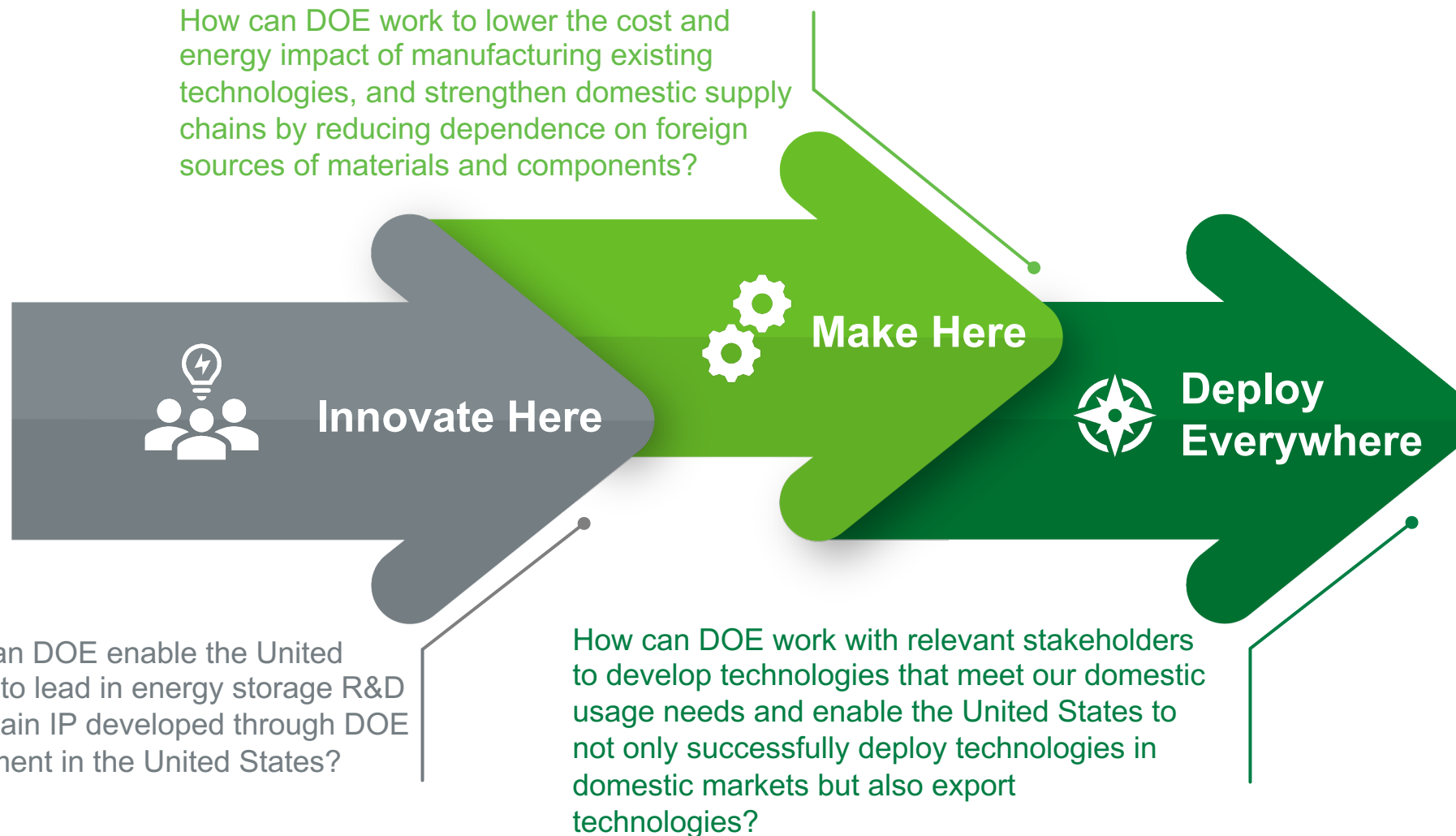
## Offices

- Office of Electricity
- Energy Efficiency and Renewable Energy
- Nuclear Energy
- Fossil Energy
- Office of Science
- Office of Technology Transitions
- ARPA-E
- Loan Programs Office

## Functions



# Addressing Key Challenges





# Grid Storage Launchpad

**Goal:** To speed innovation and deployment of grid-scale energy storage technologies to boost clean energy adaptation and make the nation's power grid more reliable, resilient, and secure.

This will provide validation and testing of new grid storage technologies under realistic grid operating conditions to sustain U.S. global leadership in the development of energy storage technologies and build a workforce of Americans trained in energy storage technologies.

1. Collaboration
2. Validation
3. Acceleration



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# Questions?

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